President’s Farewell Message

Dear the ASHRAE Thailand Chapter members,

It has been an honor and a privilege to serve as President of the ASHRAE Thailand Chapter, for 2011 – 2012. It is hard to believe that the year has come and gone so fast.

When I joined the ASHRAE Thailand Chapter office four years ago, I was determined to get involved and make a difference. Despite the downturn in the global economy, our Chapter continues to grow with our own essence of an international professional development, generate new membership and creative ideas. Our strongest development has been experienced in our student activities and the world class HVAC professional seminars, under the leadership of Dr. Chirdpun Vitoraporn, Khun Wichai Laksanakorn, Khun Apichit Lumtirtpongpana, Khun Nirun Chayangsu, Khun Ballang Sathorn, Dr. Tavee Veijapruk and all BOGs, we have conducted four professional seminars, two member night events, one ALI course and joined all ASHRAE regional and society activities.

I am confident that the next 2012 – 2013 President, Khun Ballang Sathorn, will inherit our Chapter in good shape, fit to face the future. I am totally sure that the ASHRAE Thailand Chapter will go from strength to strength and continue to be highly visible as the “International gateway” of Thai HVAC industry in all professional-related matters and will be influential in supporting change and new trends.

I wish my successor all the best for the future and I will continue to offer my support in the capacity of an ASHRAE member. Thanks once again to everyone, it was my pleasure to interact.

Sincerely,

Vorasen Leewattanakit, PE, HFDP, LEED AP BD+C
2011 – 2012 ASHRAE Thailand Chapter President

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8 อบอุตถานิยมกับองค์กรก้ามกรามปี 2011-2012
Have you registered for ASHRAE’s 2012 Annual Conference, June 23-27, San Antonio, Texas?
Register by June 1 and save. From its strong technical program to the first-hand experiences offered by its technical tours, the Annual Conference gives attendees opportunities for examining and discussing the latest technology. Don’t miss technical plenary speaker Lawrence E. Jones, Ph.D., director, Regulatory Affairs, Policy & Industrial Relations at Alstom Grid Inc., speaking on interoperability of smart building systems and smart grid. As the industry moves toward smart buildings systems, the interoperability of smart buildings and the power grid becomes paramount. Jones has over 20 years of experience in the energy industry with expertise in power systems engineering, communications and control technologies in power grid and electricity market operations, smart grid technologies including renewable energy integration.

Most of the technical program will be approved for N.Y. PDHs, AIA LUs and LEED AP credits.
www.ashrae.org/sanantonio

Support ASHRAE Research

Whether it’s improving the work setting in an office building to increase productivity or providing guidelines for emerging technologies, ASHRAE Research helps engineer the world we live, creating better indoor and outdoor environments around the globe.

This would not be possible without the individuals and organizations that have chosen to support ASHRAE’s vision with their financial contributions. To continue our progress, we need your support as well. To make a donation to ASHRAE Research, please visit www.ashrae.org/contribute.

ASHRAE Research is essential to updates that are made to the Society’s standards and guidelines, which provide uniform methods of testing for rating purposes. The standards and guidelines suggest safe practices for design and installation and provide other information which guides the industry. There are currently more than 100 ASHRAE standards and guidelines.

Visit the YEA Hospitality Suite in San Antonio

YEA members who are attending the 2012 ASHRAE Annual Conference in San Antonio, don’t forget to visit the YEA Hospitality Suite. This event will be held Sunday, June 24th from 4:00pm – 7:00pm. Stop by to chat, catch up with old (and new) friends and grab some food!
SmartStart Program Helps Students Save on Their Professional Membership

If you know students in your chapter who are getting ready to graduate, don’t let them forget about the value ASHRAE membership has after college! To help encourage these student members to maintain their ASHRAE membership, they are eligible to participate in the SmartStart program, which allows students to transfer to Associate membership at a discount for three years. The first year on the program is $20, the second year is $50 and the third year is $50. Even though they get a break on membership dues, they still receive all of the same member benefits, including the ASHRAE handbook.

You can find more information and applications for the SmartStart program here: www.ashrae.org/SmartStart.com

Important Date to Remember
Chapters - Remember CIQs for fall CRCs are due June 1, 2012. Get your MP Chair name listed sooner if you can for Centralized Training.

Sponsor the 2013 ASHRAE Webcast

Sponsorship opportunities for the April 2013 ASHRAE webcast focusing on “Assessing Building Energy Performance” are now available.

The annual program webcast program will be viewed by more than 10,000 professionals in the HVAC&R market. ASHRAE invites you to become a part of this unique learning experience for engineers, architects, contractors, building owners, developers, managers, and policy makers worldwide.

Through a sponsorship program, you can reach these engineering leaders and highlight your dedication to high performing buildings.

Sponsorship packages and benefits include:
Platinum - $15,000 (Two Available)
  o Two minute pre-taped speaking opportunity during live webcast
  o Logo displayed and recognition given by Moderator during program introduction and closing
  o Logo in Webcast brochure, electronic mailings, and on official webcast site

Gold - $10,000
  o Logo displayed and recognition given by Moderator during program introduction and closing
  o Logo in Webcast brochure, electronic mailings, and on official webcast site

Silver - $5,000
  o Logo in Webcast brochure, electronic mailings, and on official webcast site

For more information on becoming a sponsor, contact Rosy Douglas at rdouglas@ashrae.org or 678/539-1128.
HEPA Filters on a Gas Turbine?—I Should Say So!

By AAF International

In order to achieve combustion air cleanliness as specified by the machine Original Equipment Manufacturer (OEM), gas turbines have traditionally employed barrier filters which provide an efficiency level of F8 / F9 to European test standard EN779 (or MERV15 / 16 to the American ASHRAE 52.1 test standard). It is well established that conventional F8/F9 filters achieve OEM targets for acceptable component life and power output at a predicted heat rate and efficiency. The drive by gas turbine OEM’s for greater power and improved efficiency from machinery has resulted in demanding performance criteria. Increased output is coupled with higher firing temperatures and the need for inter cooling of high pressure nozzles and other hot components. As a result, air quality has become more influential in machine availability and life time performance. Some oil and gas companies with dependency on gas turbines for power generation or gas compression, have turned their attention towards High Efficiency Particulate Air Filtration (HEPA) and the results have been startling. At present, there are a number of 25 MW sized gas turbines operating in the North Sea, which have each provided an extra US$5m in revenue per year as a direct result of installing HEPA filtration systems.

During 1999, the filter manufacturer launched a new filter class specifically for offshore marine platform applications which is 95% ASHRAE high efficiency filters (H95). The H95 was the result of two years of operational research into pre-existing compressor fouling problems related to salt and hydrocarbon percolation through traditional filter types. Customers rarely call their suppliers and say: “you have a good product, its working very well, in fact, it has exceeded our expectations and is allowing us to increase our income revenue.” But that is the kind of feedback that have been received. They were invited to meet the Gas Turbine OEM & the Operator to review the performance of the H95. The joint parties established that the H95 filter had improved the gas turbine air quality so significantly that operators observed longer periods of stable gas generator N1 speed and a much reduced exhaust temperature fluctuation. Employing a different programme of 250 hour incremental extentions, the periods between water washes were exceeded above the OEM recommended period of every 750-2,000 hours. The resultant reduction in off-line activities, from 12-4 per year afforded a significant effect on gas and oil production with consequential increases in revenue. They agreed to continue development of the use of HEPA filtration technology to further enhance the combustion air quality. The robust construction, special seals and water carrying capabilities developed especially for the H95 class had to further incorporate a considerable increase in filter media area. This had to be carried out using a special pleating process, developed for the H95 filter efficiency. The resultant improvement in air quality has been observed on different machines from 6 MW through to 40 MW with results consistently demonstrating the benefit of HEPA grade combustion air.

Table 1 highlights the incremental benefits of employing the increased performance H95 range. To date all of the H12 technology has been installed into housings which were designed to facilitate F8/F9 filters and therefore higher resistance to airflow and shorter product life has resulted. (see figures in Table 1.) Increase in filter resistance was to be expected and the minimum impact on heat rate & power output is understandable as cleaner conditions have prevented deterioration in performance. In fact, engine shut downs have generally been as a result of non-related maintenance issues.
### Table 1: Gas Turbine Operational Cost Analysis – 25 MW Machine

<table>
<thead>
<tr>
<th>Filter Quantity</th>
<th>90% Eff. Filter</th>
<th>95% H95 Eff. Filter</th>
<th>99.5% Eff. Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected filter life – months</td>
<td>30</td>
<td>30</td>
<td>18</td>
</tr>
<tr>
<td>Engine wash frequency – hours</td>
<td>750</td>
<td>2,000</td>
<td>8,760</td>
</tr>
<tr>
<td>Filter costing (Filters + Labour) / year</td>
<td>$7,824</td>
<td>$10,128</td>
<td>$24,560</td>
</tr>
<tr>
<td>Washing Cost (12 hrs off-line/event)</td>
<td>$29,167</td>
<td>$10,938</td>
<td>$2497</td>
</tr>
<tr>
<td>Production loss per annum (20,000 barrels oe/d @ $50 / barrel)</td>
<td>$5,882,048</td>
<td>$2,205,768</td>
<td>$503,600</td>
</tr>
<tr>
<td>Total cost impact</td>
<td>$5,919,039</td>
<td>$2,226,834</td>
<td>$530,657</td>
</tr>
</tbody>
</table>

**Net Annual Cost benefit with H95 – per machine**: $3,692,205

**Net Annual Cost benefit with 99.5%,H12 – per machine**: $5,388,382

In conclusion, the air quality that can be provided outstrips anything offered by turbo-machinery manufacturers. The benefits of clean air are clearly demonstrated and easily achieved if the operator focuses on the critical issues of good maintenance and data storage. Although the above example has been taken from an offshore oil and gas installation, the message is clear. Clean air can advantageously change the economics of turbo-machinery operation, whether that is in co-generation or on CHP plant, the effects are the same:

- better machine availability;
- lower operating costs;
- longer hot-end component life;
- more predictable performance; and
- improved preventative maintenance.

This can be improved on with better efficiency filters. The gas turbine industry can benefit from our capabilities in air filtration.  

*(If you need more information contact Mr. Tavatchai S/Chaimitr Engineering International Company Limited or send an email tavatchai_s@chaimitr.com or filtermans@hotmail.com) or visit www.chaimitr.com*
ประชุมเลือกตั้งกรรมการ วาระปี July 1, 2012 – June 30, 2013

เมื่อวันที่ 26 เมษายน 2555 ASHRAE Thailand Chapter จัดการประชุมเลือกตั้งกรรมการวาระปี July 1, 2012 – June 30, 2013 โดยมีรายละเอียดดังนี้

บรรยากาศในการประชุม
ระเบียบข้อบังคับ (By laws) ของ ASHRAE Thailand Chapter Officers, Immediate Past President และ BOG จะมีการประชุมและแต่งตั้ง Chapter Nominating Committee (กรรมการสรรหา) จำนวน 5 ตำแหน่ง เพื่อทำการสรรหาและเสนอรายชื่อสมาชิกผู้ที่มีสิทธิ์เข้ารับการเลือกตั้งในตำแหน่งต่างๆ ของวาระปีที่ถัดไป และจาการการประชุมของ Officers, Immediate Past President และ BOG ในเดือนมีนาคม 2555 ที่ผ่านมา ที่ประชุมได้แต่งตั้งสมาชิกดังต่อไปนี้เป็น Chapter Nominating Committees:

1. Dr. Chirdpun Vitooraporn Member (Chair)
2. Dr. Rawee Ngamchokchaicharoen Member
3. Mr. Komsan Sripavatakul Member
4. Mr. Rapeerat Thunyawatpornkul Member
5. Mr. Sirichai Prasertwaree Member

ช่วง Chapter Nominating Committees ข้างต้น ได้ประชุมร่วมกันที่ประชุมในเดือนมีนาคม 2555 และได้ข้อสรุปที่จะเสนอรายชื่อสมาชิกดังต่อไปนี้ เพื่อเข้ารับการเลือกตั้ง:

Officers (2012-2013) Nominee Lists

1. Mr. Ballang Sathorn President (President-Elect ปี 2012-2013 ขึ้นรับตำแหน่ง President โดยอัตโนมัติตาม Chapter Bylaws)
2. Mr. Chartchai Pisattiboriboon President-Elect
3. Mr. Sumet Jiambut Vice President
4. Mr. Chakrapan Pawankarat Vice President
5. Mr. Chokewichit Laksanakorn Treasurer
6. Mr. Pachern Sangbuttsarakum Secretary

Board of Governors (2012-2013) Nominee Lists

1. Mr. Wichai Laksanakorn
2. Mr. Sumeth Simakulthorn
3. Mr. Chaiyan Salicurt
4. Chair Prof. Tawee Vechaphutti
5. Assoc.Prof. Richakorn Chirakalvasarn
6. Mr. Piya Chongsawatana
7. Mrs. Jintana Sirisantana
8. Dr. Rawee Ngamchokchaicharoen
9. Mrs. Apiwich Lumlertpongpana
10. Mr. Uthai Lohachitrandon
11. Dr. Chirdpun Vitooraporn
12. Mr. Nirun Chayangsu
13. Mr. Vorasen Leewattanakit

CHAPTER MAY NOT ACT FOR THE SOCIETY
American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
AN INTERNATIONAL ORGANIZATION
วันพฤหัสบดีที่ 31 พฤษภคม 2555  ASHRAE Thailand Chapter ร่วมกับสมาคมวิศวกรรมปรับอากาศแห่งประเทศไทย จัดสัมมนาวิชาการ ครั้งที่ 3 เรื่อง “Sustainable Design Workshop Bangkok 2012” ณ ห้องม็องฟิลนี ชั้น 3 โรงแรมโกลเดน ทิวสิริ ซอยแพร่ธนินทร์

วิทยากรโดย Dr. Thomas Lawrence (Ph.D.P.E., LEED-AP) Faculty of Engineering The University of Georgia, Athens, GA
### Support 2 Packages - A

<table>
<thead>
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<th>Sponsor</th>
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<tr>
<td>CAREL (Thailand) Co., Ltd.</td>
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<tr>
<td>Kruger Ventilation Industries (Thailand) Co., Ltd.</td>
<td>2</td>
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<td>I.T.C. (1993) Co., Ltd.</td>
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<td>Trane Thailand</td>
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<td>Kulthorn Group Co., Ltd.</td>
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<td>Windchill Limited</td>
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### Support 1 Packages - B

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<tr>
<td>Aircon-MFG Co., Ltd.</td>
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<td>Chaimitr Engineering International Co., Ltd.</td>
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<td>Danfoss (Thailand) Co., Ltd.</td>
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<tr>
<td>D-Kühle (Thailand) Co., Ltd.</td>
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<tr>
<td>Eastern Polymer Industry Co., Ltd.</td>
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<tr>
<td>EEC Engineering Network Co., Ltd.</td>
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<td>Gekko Industries Co., Ltd.</td>
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<td>Intelligent Systems Management Co., Ltd.</td>
<td>1</td>
</tr>
<tr>
<td>Jardine Engineering Co., Ltd.</td>
<td>1</td>
</tr>
<tr>
<td>Johnson Controls International (Thailand) Co., Ltd.</td>
<td>1</td>
</tr>
<tr>
<td>Kruger Ventilation Industries (Thailand) Co., Ltd.</td>
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</tr>
<tr>
<td>Microfiber Industries Co., Ltd.</td>
<td>1</td>
</tr>
<tr>
<td>Patkol Public Co., Ltd.</td>
<td>1</td>
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<tr>
<td>S.D.C. Design Co., Ltd.</td>
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<tr>
<td>Siam Compressor Industry Co., Ltd.</td>
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<td>Siam Daikin Sales Co., Ltd.</td>
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<tr>
<td>Taikisha (Thailand) Co., Ltd.</td>
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<tr>
<td>Utile Engineering International Co., Ltd.</td>
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<tr>
<td>W. AND Association Consultants Co., Ltd.</td>
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